

CLAIMS

1. An information recording apparatus comprising:

a recording device for recording record information onto an
5 information recording medium, in which a recording speed can be changed to
at least first and second linear velocities and which supports the first and
second linear velocities, by irradiating laser light with a variable recording
power;

a measuring device for measuring reproduction quality of the record
10 information by reproducing the record information recorded at the first linear
velocity, if the recording speed is changed from the first linear velocity to the
second linear velocity;

a first calculating device for calculating a link power which is the
recording power which gives the reproduction quality measured by said
15 measuring device in the second linear velocity, on the basis of correlation
information for representing a correlation between the recording power in the
second linear velocity and the reproduction quality related to the record
information; and

an adjusting device for adjusting the recording power, by a
20 predetermined adjustment amount at a time in stages or in a predetermined
change rate in continuity, such that the recording power changes from the
link power to a reference power which is the recording power which gives
desired target quality as the reproduction quality, if the recording speed is
changed from the first linear velocity to the second linear velocity.

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2. The information recording apparatus according to claim 1, wherein

said measuring device measures the reproduction quality by reproducing the record information recorded immediately before the recording speed is changed from the first linear velocity to the second linear velocity.

5 3. The information recording apparatus according to claim 1, wherein the predetermined adjustment amount or the predetermined change rate is variable.

4. The information recording apparatus according to claim 1, wherein
10 said adjusting device adjusts the recording power such that the recording power changes to the reference power if a difference between the link power and the reference power is equal to or less than a predetermined amount.

5. The information recording apparatus according to claim 1, further
15 comprising a second calculating device for preparing the correlation information and for calculating the reference power, by reproducing test information which is the record information recorded for test by said recording device while the recording power is changed.

20 6. The information recording apparatus according to claim 1, wherein the reproduction quality includes at least one of an asymmetry value, a jitter value and a reproduction error rate.

7. The information recording apparatus according to claim 5, further
25 comprising a controlling device for controlling said recording device to record at least one of the correlation information prepared by said second calculating

device and information as for the reference power calculated by said second calculating device, onto said information recording medium.

8. An information recording method in an information recording
5 apparatus comprising: a recording device of recording record information onto an information recording medium, in which a recording speed can be changed to at least first and second linear velocities and which supports the first and second linear velocities, by irradiating laser light with a variable recording power,

10 said information recording method comprising:

a measuring process of measuring reproduction quality of the record information by reproducing the record information recorded at the first linear velocity, if the recording speed is changed from the first linear velocity to the second linear velocity;

15 a first calculating process of calculating a link power which is the recording power which gives the reproduction quality measured at said measuring process in the second linear velocity, on the basis of correlation information for representing a correlation between the recording power in the second linear velocity and the reproduction quality related to the record
20 information; and

an adjusting process of adjusting the recording power, by a predetermined adjustment amount at a time in stages or in a predetermined change rate in continuity, such that the recording power changes from the link power to a reference power which is the recording power which gives
25 desired target quality as the reproduction quality, if the recording speed is changed from the first linear velocity to the second linear velocity.

9. A computer program for record control to control a computer provided in the information recording apparatus according to claim 1, to make the computer function as at least one portion of said first calculating device, said
- 5 measuring device and said adjusting device.